

WHAT IS CLAIMED IS:

1. A semiconductor package, comprising:
a semiconductor die with a bond pad;
5 a package lead;
a bond wire comprising a first end portion coupled to the package lead, a
second end portion coupled to the bond pad, and an intermediate portion; and
an intermediate lead finger positioned between the package lead and the bond
pad, wherein the intermediate lead finger is coupled to the intermediate portion of the
10 bond wire.
2. The package of claim 1, further comprising an intermediate lead finger
mounting substrate, wherein the intermediate lead finger is mounted on the
intermediate lead finger mounting substrate.
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3. The package of claim 1, wherein the intermediate lead finger and the
intermediate lead finger mounting substrate are formed of a non-conducting material.
4. The package of claim 3, further comprising a die attachment pad attached to
20 the intermediate lead finger mounting substrate.
5. The package of claim 4, wherein the die attachment pad is made of a heat-
conducting material for rapid heat dissipation.
- 25 6. The package of claim 4, further comprising a mold compound that encloses
the semiconductor die, a portion of the package lead, the bond wire, the intermediate
lead finger, and the die attachment pad.
7. The package of claim 1, wherein the intermediate lead finger comprises a non-
30 conducting portion for attaching to the intermediate portion of the bond wire.

8. The package of claim 1, wherein the semiconductor die comprises a programmable logic device.

9. A semiconductor package, comprising:

- 5 an intermediate lead finger mounting substrate having a first surface and a second surface;
- a semiconductor die with a bond pad, the semiconductor die being attached on the first surface of the intermediate lead finger mounting substrate;
- a package lead;
- 10 a bond wire comprising a first end portion coupled to the package lead, a second end portion coupled to the bond pad, and an intermediate portion;
- an intermediate lead finger mounted on the first surface of the intermediate lead finger mounting substrate, wherein the intermediate lead finger is positioned between the package lead and the bond pad, and wherein the intermediate lead finger
- 15 is attached to the intermediate portion of the bond wire;
- a heat sink coupled to the second surface of the intermediate lead finger mounting substrate; and
- a mold compound that encloses the semiconductor die, a portion of the package lead, the bond wire, the intermediate lead finger, and the heat sink.

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10. The package of claim 9, wherein the intermediate lead finger and the intermediate lead finger mounting substrate are formed of a non-conducting material.

11. The package of claim 9, wherein the intermediate lead finger comprises a
25 non-conducting portion for attaching to the intermediate portion of the bond wire.

12. The package of claim 9, wherein the semiconductor die comprises a programmable logic device.

30 13. The package of claim 9, wherein the semiconductor die is mounted on a center portion of the first surface of the intermediate lead finger mounting substrate, and

wherein the intermediate lead finger is mounted on a peripheral portion of the first surface of the intermediate lead finger mounting substrate.

14. A method of forming a semiconductor package, comprising:

5 providing an intermediate lead finger mounting substrate, the intermediate lead finger mounting substrate comprising at least one intermediate lead finger mounted thereon;

attaching the intermediate lead finger mounting substrate to a lead frame, the lead frame comprising a package lead;

10 positioning a semiconductor die on the intermediate lead finger mounting substrate;

attaching a bond wire to the semiconductor die and to the package lead;

limiting movement of the bond wire; and

15 after limiting movement of the bond wire, enclosing the intermediate lead finger mounting substrate, the intermediate lead finger, the semiconductor die, a portion of the package lead, and the bond wire with a molding compound.

15. The method of claim 14, wherein the attaching a bond wire comprises:

attaching a first end portion of the bond wire to the semiconductor die; and

20 attaching a second end portion of the bond wire to the package lead.

16. The method of claim 14, wherein the limiting movement of the bond wire comprises attaching an intermediate portion of the bond wire to the intermediate lead finger.

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17. The method of claim 14, wherein the attaching the intermediate lead finger mounting substrate on a lead frame comprises attaching the intermediate lead finger mounting substrate on a die attachment pad of the lead frame.

18. The method of claim 14, wherein the positioning comprises attaching the semiconductor die to a center portion of the intermediate lead finger mounting substrate.

- 5 19. A method of forming a semiconductor package, comprising:
- providing an intermediate lead finger mounting substrate, the intermediate lead finger mounting substrate comprising an intermediate lead finger mounted thereon;
- attaching the intermediate lead finger mounting substrate on a lead frame, the
- 10 lead frame comprising a package lead and a die attachment pad for attaching to the intermediate lead finger mounting substrate;
- attaching a semiconductor die on the intermediate lead finger mounting substrate;
- attaching a first end portion of a bond wire to a bond pad of the semiconductor
- 15 die;
- attaching a second end portion of the bond wire to the package lead;
- attaching an intermediate portion of the bond wire to the intermediate lead finger to limit movement of the bond wire; and
- enclosing the intermediate lead finger mounting substrate, the intermediate
- 20 lead finger, the semiconductor die, a portion of the package lead, and the bond wire with a molding compound.